

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for making an absorbent composite from a continuous tow comprising the steps of:
spreading a crimped tow;
de-registering the crimped tow by using at least two pairs of rollers, each pair of rollers having a metal-faced roller and a rubber-faced roller and the metal-faced rollers being oppositely disposed ~~between the pairs of rollers~~ about the tow;
shaping the de-registered tow; and
distributing a particulate onto the shaped tow.
2. (original) The method of Claim 1 wherein said metal faced rollers being smooth, grooved, threaded, textured, or combinations thereof.
3. (original) The method of Claim 1 wherein said rubber faced roller being smooth.
4. (original) The method of Claim 1 wherein said pair of rollers being vertically aligned, one over the other.

5. (currently amended) The method of Claim 1 wherein one said pair ~~ex of~~ rollers (S_1) rotates faster than the other pair of rollers (S_2) .

6. (currently amended) The method of Claim 5 wherein the ~~ratio of the faster roller pair to the other roller pair being in the range of 1 to 2~~ a speed ratio (S_1/S_2) being in the range of $1 \leq S_1/S_2 \leq 2$.

7. (currently amended) The method of Claim 6 wherein the ~~ratio of the faster roller pair to the other roller pair being 1.1 to 1.7~~ the speed ratio (S_1/S_2) being in the range of $1.1 \leq S_1/S_2 \leq 1.7$.

8. (original) The method of Claim 1 further comprising shaping the de-registered tow to a substantially rectangular cross-section.

9. (original) The method of Claim 1 further comprising applying a liquid to the tow.

10. (currently amended) An apparatus for making an absorbent composite from a continuous tow comprising the steps of:

means for spreading a crimped tow;

means for de-registering the crimped tow by using at least two pairs of rollers, each pair of rollers having a metal faced roller and a rubber faced roller and the metal faced rollers being oppositely disposed ~~between the pairs of rollers~~ about the tow;

means for shaping the de-registered tow; and

means for distributing a particulate onto the shaped tow.

11. (original) The apparatus of Claim 10 wherein said metal faced rollers being smooth, grooved, threaded, textured, or combinations thereof.

12. (original) The apparatus of Claim 10 wherein said rubber faced roller being smooth.

13. (original) The apparatus of Claim 10 wherein said pair of rollers being vertically aligned, one over the other.

14. (currently amended) The apparatus of Claim 10 wherein one said pair ~~ex of~~ of rollers (S₁) rotates faster than the other pair of rollers (S₂).

15. (currently amended) The apparatus of Claim 14 wherein the ~~ratio of the faster roller pair to the other roller pair being in~~

~~the range of 1 to 2~~ a speed ratio (S_r/S_o) being in the range of $1 \leq S_r/S_o \leq 2$.

16. (currently amended) The apparatus of Claim 15 wherein the ~~ratio of the faster roller pair to the other roller pair being 1.1 to 1.7~~ the speed ratio (S_r/S_o) being in the range of $1.1 \leq S_r/S_o \leq 1.7$.

17. (original) The apparatus of Claim 10 further comprising means for shaping the de-registered tow to a substantially rectangular cross-section.

18. (original) The apparatus of Claim 10 further comprising means for applying a liquid to the tow.

19. (currently amended) A method for making an absorbent composite from a continuous tow comprising the steps of:

spreading a crimped tow;

de-registering the crimped tow by using at least two pairs of rollers, each pair of rollers having a metal-faced roller and a rubber-faced roller and ~~the metal-faced rollers being disposed between the pairs of rollers on the same side of said pairs of rollers~~ said pairs of rollers being vertically aligned, one over the other or at any angle between vertically aligned and horizontally aligned, but not including horizontally aligned;

shaping the de-registered tow; and
distributing a particulate onto the shaped tow.

20. (original) The method of Claim 19 wherein said metal faced rollers being smooth, grooved, threaded, textured, or combinations thereof.

21. (original) The method of Claim 19 wherein said rubber faced roller being smooth.

22. (canceled)

23. (currently amended) The method of Claim 19 wherein one said pair ~~ex of~~ of rollers (S₁) rotates faster than the other pair of rollers (S₂).

24. (currently amended) The method of Claim 23 wherein the ~~ratio of the faster roller pair to the other roller pair being in the range of 1 to 2~~ a speed ratio (S₁/S₂) being in the range of 1 ≤ S₁/S₂ ≤ 2.

25. (currently amended) The method of Claim 24 wherein the ~~ratio of the faster roller pair to the other roller pair being 1.1 to 1.7~~ the speed ratio (S₁/S₂) being in the range of 1.1 ≤ S₁/S₂ ≤ 1.7.

26. (original) The method of Claim 19 further comprising shaping the de-registered tow to a substantially rectangular cross-section.

27. (original) The method of Claim 19 further comprising applying a liquid to the tow.

28. (currently amended) An apparatus for making an absorbent composite from a continuous tow comprising the steps of:

means for spreading a crimped tow;

means for de-registering the crimped tow by using at least two pairs of rollers, each pair of rollers having a metal faced roller and a rubber faced roller and ~~the metal faced rollers being disposed between the pairs of rollers on the same side of said pairs of rollers~~ said pairs of rollers being vertically aligned one over the other or at any angle between vertically aligned and horizontally aligned, but not including horizontally aligned;

means for shaping the de-registered tow; and

means for distributing a particulate onto the shaped tow.

29. (original) The apparatus of Claim 28 wherein said metal faced rollers being smooth, grooved, threaded, textured, or combinations thereof.

30. (original) The apparatus of Claim 28 wherein said rubber faced roller being smooth.

31. (canceled)

32. (currently amended) The apparatus of Claim 28 wherein one said pair ~~ex of~~ rollers (S₂) rotates faster than the other pair of rollers (S₁).

33. (currently amended) The apparatus of Claim 32 wherein ~~the ratio of the faster roller pair to the other roller pair being in the range of 1 to 2~~ a speed ratio (S₂/S₁) being in the range of 1 ≤ S₂/S₁ ≤ 2.

~~33~~ 34. (currently amended) The apparatus of Claim 33 wherein ~~the ratio of the faster roller pair to the other roller pair being 1.1 to 1.7~~ the speed ratio (S₂/S₁) being in the range of 1.1 ≤ S₂/S₁ ≤ 1.7.

~~34~~ 35. (currently amended) The apparatus of Claim 28 further comprising means for shaping the de-registered tow to a substantially rectangular cross-section.

~~35~~ 36. (currently amended) The apparatus of Claim 28
further comprising means for applying a liquid to the tow.